N° 18,983 A.D. 1914

(*Under International Convention.*)

Date claimed for Patent under Patents and Designs Act, 1907, being date of first Foreign Application (in the United States), 24th Jan., 1914

Date of Application (in the United Kingdom), 22nd Aug., 1914

At the expiration of twelve months from the date of the first Foreign Application, the provision of Section 91 (3) (a) of the Patents and Designs Act, 1907, as to inspection of Specification, became operative

Accepted, 22nd Apr., 1915

COMPLETE SPECIFICATION.

Left Hand Marginal Release Mechanism for Typewriting Machines.

I, THERON LORENZO KNAPP, Mechanician, 217, Jefferson Street, City of Woodstock, in the County of McHenry, State of Illinois, United States of America, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to improvements in typewriting machines having left hand marginal stop mechanism for limiting the movements of the paper carriage toward the right in the return of the carriage to its starting point thereby to determine the width of the margin at the left hand side of the typewritten page.

The invention is applicable to typewriting machines having a left hand marginal stop mechanism comprising a rod adapted to rotate and to slide endwise in a carriage supporting frame which rod is provided with a stop arm engaging in one position with a stop lug upon the frame but which by the rotation of the rod may be swung to a position in which it is free of said lug to permit the carriage to have a further movement when it is desired to do writing on the left hand marginal part of the paper in the carriage.

A well-known machine having these characteristics is the "Oliver" machine and the invention is illustrated as applied thereto. It is, however, generally applicable to all machines having left hand marginal stop mechanism of the before mentioned character.

The object of the invention is to provide improved means for operating a left hand marginal stop mechanism to release the paper carrier frame.

The invention, therefore, consists in left hand marginal release mechanism comprising a key lever pivotally supported at its rear end and intermedially connected with a secondary lever at an intermediate point therein, said secondary lever being pivotally supported at its forward end and at its rear end connected to a link having operative connection with the marginal stop mechanism to rotate the same. The invention further consists in the arrangements of connecting the secondary lever to the link by means affording vertical adjustment of the latter relative to the lever.

[*Price* 6*d.*]

Left Hand Marginal Release Mechanism for Typewriting Machines.

In the accompanying drawings:—

Figure 1 is a plan view of the frame of a type-writing machine, showing only the parts relating to the invention;

Figure 2 is a view from beneath, of the same parts;

Figure 3 is a view in vertical section, taken longitudinally through the machine frame, showing in side elevation the carriage-stop operating devices;

Figure 4 is a detail section, taken on line 4—4 of Figure 3.

The accompanying drawings illustrate such parts of an "Oliver" typewriting machine as are necessary to an understanding of the present invention. Referring to the parts illustrated that have been heretofore employed in the "Oliver" machine, the machine frame or base is provided with a horizontal top-plate A, and key-levers B, B, which extend from front to rear of the machine with their rear portions beneath said top-plate, and are pivoted at their rear ends in bearing blocks H that are secured to the under surface of said top-plate. Mounted on the machine-frame is a shift-frame D, which supports the paper carriage C, (Figure 3), and is movable backwardly and forwardly from its central position, whereby the platen of the carriage may be brought under the striking-point of three sets of types on the type-bars. Said shift-frame embraces front and rear horizontal guide-bars C^1 C^2, on which the paper-carriage C (Figure 3) rests and travels endwise in the printing operation.

A horizontally arranged rod F is mounted in lugs *d*, *d* on the shift-frame, at the right hand side of the machine and at the rear of the carriage-supporting guide-bar C^1 and parallel with said guide-bar. Said rod F is adapted to be moved endwise with respect to the shift-frame and also to rock or rotate in the lugs *d*. The rod F carries a stop-arm F^1, which is adapted for contact with a stop-arm or lug E, which is rigidly attached to the carriage-frame. The rod F is adjustably held in place by a spring actuated pawl F^2, having the form of a spring arm, which is secured to the shift-frame and has an upwardly extending tooth or pawl f^1 which engages a series of teeth or notches on the under side of the rod F, (see dotted lines Figure 1) when the stop-arm F^1 is in the path of the carriage lug E. When the rod is partially rotated, the pawl is brought into contact with the smooth part of the rod, thereby permitting said rod to be moved endwise to adjust the stop-arm F^1 with respect to the travel of the carriage in a manner to vary the width of the blank space or margin left on the left-hand side of the sheet in writing.

The rod F is rotated in the bearing-lugs *d*, *d* through the medium of a lever mechanism, located at the right-hand side of the machine base and including a key-lever G, having at its forward end a key g^1 and provided with a lifting spring H, (see Figure 3) located between said lever and the base of the machine. Said key-lever is connected by operative connections with the rod F in a manner to rock or partially rotate the same, while permitting endwise adjusting movement of said rod F, relatively to the said key-lever and connections. The connection between said key-lever G and the rod F embraces a rod F^3 and an upright link G^2. The rod F^3 is arranged parallel with said rod F at the rear of the latter, and is rigidly connected at its ends therewith. The upright link G^2 has operative connection with the key-lever G by means hereinafter described. The upper end of said link is provided with an aperture through which said rod F^3 passes, and said rod fits loosely within said aperture, so as to enable the same to slip endwise therethrough when the rod F is moved endwise to adjust the position of the stop-lug F^1.

In the operation of the parts described the lifting spring H normally holds the lever in its uppermost position, and the stop-arm F^1 in the path of the stop-lug E of the carriage. When it is desired to print a letter or word upon the determined margin, the stop-arm F^1 is swung downwardly out of the way of the stop-lug E of the carriage by depressing the key-lever G, after which the carriage may pass beyond the limit of movement before determined by the stop-lug and stop-arm.

The parts of the machine described correspond with those heretofore used in the "Oliver" typewriting machine. The features more directly relating to the present invention are constructed as follows:

The key-lever G is extended at its rear end to a point near the rear of the machine frame, and is pivoted in one of the bearing blocks H^1 of the main key-levers B, B. The forward end of said key-lever G is guided in a vertical guide-slot formed in a fixed comb-plate I, by which the forward ends of the main key-levers are also guided. A secondary lever G^1, is located at one side of, and parallel with, the lever G and is pivotally or loosely connected at its forward end with the machine frame by the insertion of such forward end in a vertical slot or aperture *i* formed in the comb-plate I. The rear end of the secondary lever G^1 is approximately located vertically beneath the rod F. The key-lever G is connected with the secondary lever G^1 by means of a pivot stud g^2 extending through both of the levers at a point between the forward ends of the said levers and the rear end of the secondary lever G^1. As illustrated, the forward end of the key-lever G is located at the right-hand side of the forward end of the auxiliary lever G^1, and said key-lever is bent laterally to provide an oblique part which passes over the auxiliary lever, which latter is provided with a U-shaped bend at the crossing point, to prevent interference of one lever with the other.

The link G^2 is pivoted at its lower end to the rear end of the secondary lever G, so as to partake of the rising and falling movement imparted to said lever G by the action of the lever G and its lifting spring. By the employment of the secondary lever G^1, which is engaged with the machine frame at its forward end, in connection with the lever G, which is pivoted to the machine frame at its rear end, the proper extent of vertical movement is afforded in the link G^2, without requiring an undue extent of vertical movement in the forward end of the key-lever G.

To provide means for adjusting the position of the link G^2 relatively to the lever G^1, in order that the position of the stop-arm F^1, at the upper and lower limits of its throw, may be properly adjusted relatively to the stop on the carriage frame and other parts, a construction is provided as follows: The link G^2 is extended at its lower end a considerable distance below the rear end of the lever G^1, and an upright arm G^3 is rigidly affixed at its lower end to the lower end of the link, and is pivoted at its upper end to the lever G^1. An adjustable connection is provided between the said link and the arm G^3, consisting of a clamp-bolt g^3, which passes through a vertical slot in one of said parts. As shown, the arm G^3 is provided with a slot g^4, and the clamp-bolt g^3 passes through such slot and is inserted in a screw-threaded aperture in the link. The clamp-bolt and slot, arranged as described, enable the link to be shifted vertically with relation to the arm G^3 and lever G^1, and to be rigidly held in its adjusted position, and also afford a rigid connection between said arm and the link. The upper end of said arm is pivoted to the lever G^1 by means of a pivot-stud g^5. The lever G^1 is located between the link G^2 and arm G^3, and, in order to provide space for the head of the pivot-stud g^5, said link is provided with a vertically extending slot or opening g^6, into which extends the head on the adjacent end of the pivot stud.

The link G^2 and arm G^3 are arranged to extend a considerable distance below the levers G and G^1, in order that access may be easily had to the clamp-bolt in effecting adjustment of the link relatively to the arm.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In a typewriting machine having left hand marginal stop mechanism of the character described, marginal release mechanism comprising a key lever pivotally supported at its rear end and intermedially connected with a secondary

lever at an intermediate point therein, said secondary lever being pivotally supported at its forward end and at its rear end connected to a link having operative connection with the marginal stop mechanism to rotate the same, substantially as described.

2. A marginal release mechanism according to Claim 1 in which the secondary lever is connected to said link by means affording vertical adjustment of the latter relative to the lever, substantially as described.

3. In a typewriting machine, left hand marginal release mechanism substantially as hereinbefore described with reference to the accompanying drawings.

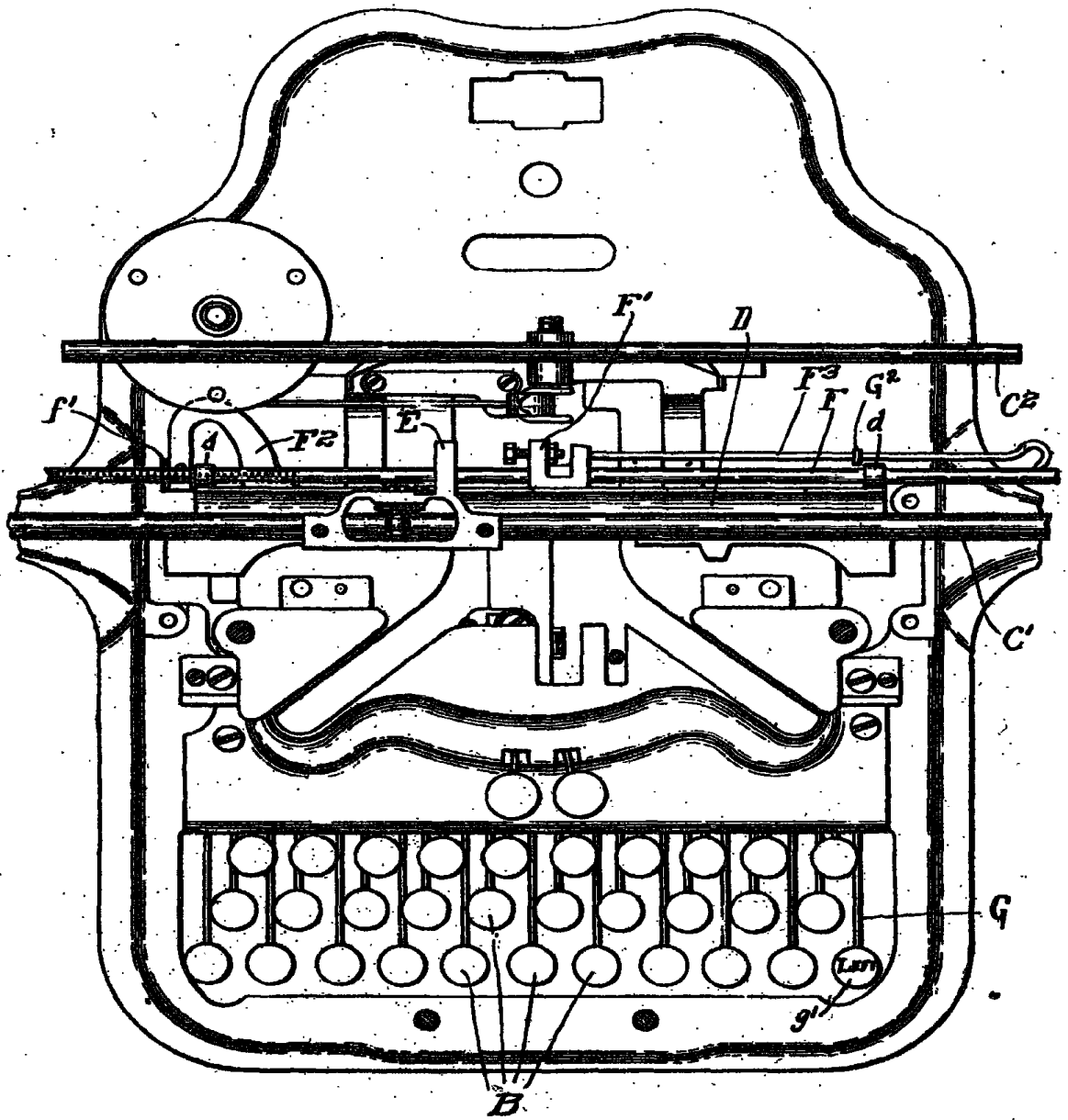
Dated this 21st day of August, 1914.

MARKS & CLERK.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1915.

[This Drawing is a reproduction of the Original on a reduced scale.]

Fig.1.



Malby & Sons, Photo-Litho.

A.D. 1914. Aug. 22. N° 18,983.
KNAPP'S Complete Specification.

[This Drawing is a reproduction of the Original on a reduced scale.]

Fig.2.

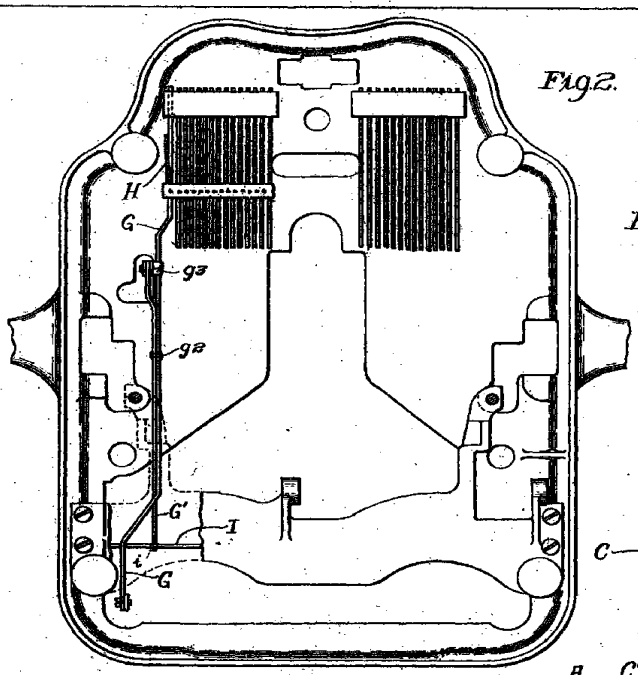


Fig.4

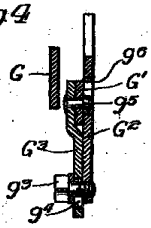
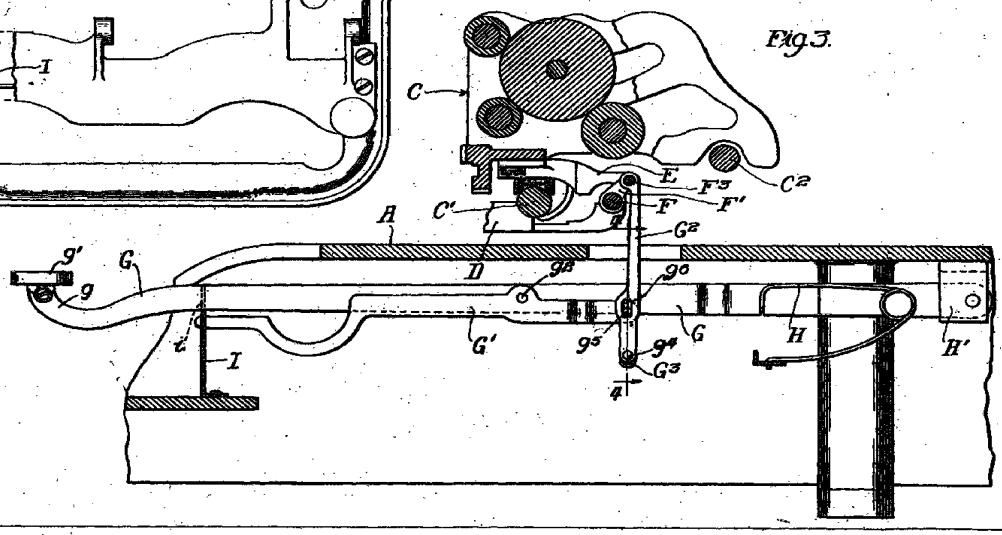


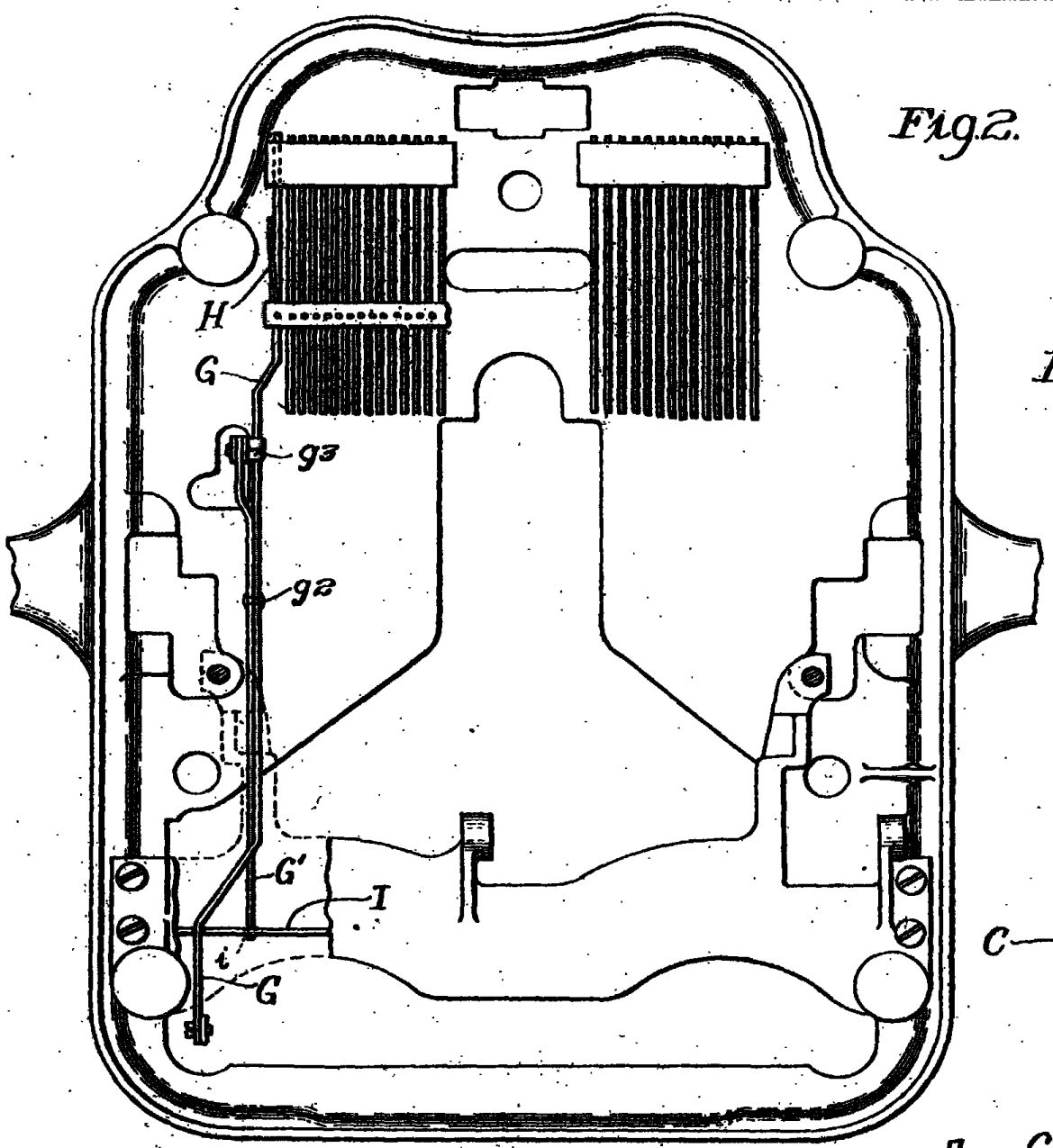
Fig.3.



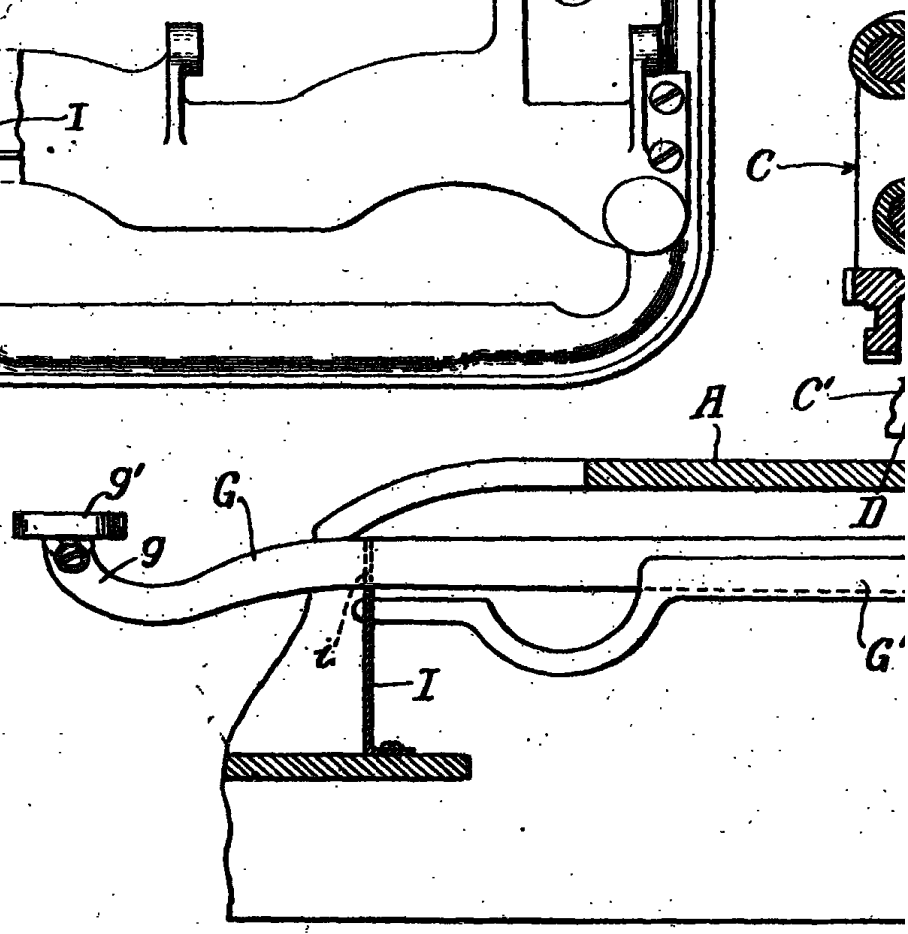
Mellgrh Sons, Photo-Litho

[This Drawing is a reproduction of the Original on a reduced scale.]

Fig 2.



Fig



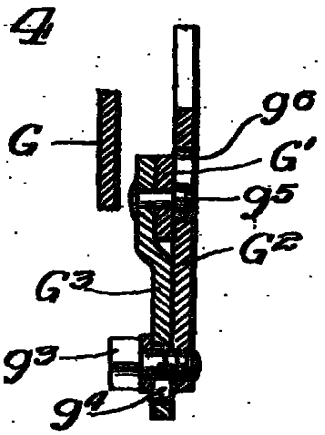
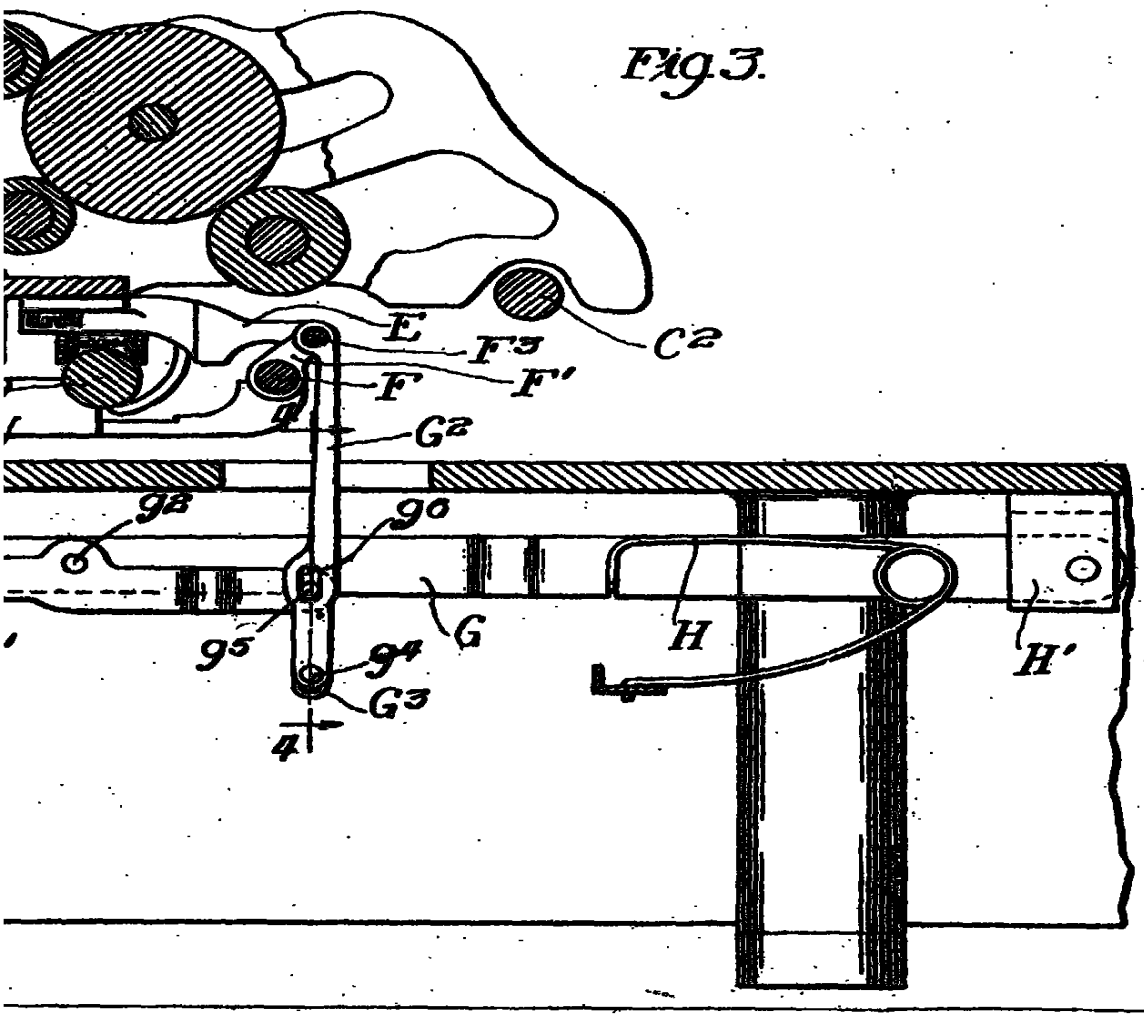


Fig 3.



Malby& Sons, Photo-Litho